



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,163	07/30/2001	Sunghyun Choi	US 010342	2123

7590 01/11/2006

c/o PHILIPS ELECTRONICS NORTH AMERICA CORPORATION
Corporate Intellectual Property
PO BOX 3001
Briarcliff Manor, NY 10510

EXAMINER

CHUNG, PHUNG M

ART UNIT	PAPER NUMBER
----------	--------------

2138

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/918,163	Applicant(s) CHOI, SUNGHYUN	
	Examiner Phung My Chung	Art Unit 2138	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 6-8, 14-16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sipola (WO 0045543) in view of Lindhorst-Ko et al (2002/0075873).

As per claims 1 and 6-7, Sipola discloses a method, comprising the steps of:

- a) transmitting a sequence of packets from a source node to a destination node;
- b) determining whether at least one of the plurality of the data blocks (header blocks) within a particular packet is lost in the transmission;
- c) storing other header blocks that are successfully received within the particular packet in a storage medium for subsequent retrieval;
- d) subsequently transmitting a request for retransmission of the particular packet containing the lost header block to the source node; and
- e) combining the stored header blocks with the lost header block retrieved from the subsequent transmission in sequential order, wherein when the retransmission of the particular packet contains a lost header block, transmitting a request for retransmission to the source node only when a complete packet cannot be formed by the combining of the stored header blocks and the retransmitted header blocks of the particular packet. (See Fig. 3, pg. 11, line 34 to pg. 13, line 31). Sipola does not disclose that the data blocks are payload blocks. However, it would have been a matter of design choice to a person of ordinary skill in the communication art, at the time the

invention, to set the data blocks as payload blocks. This is because Sipola discloses that the invention may vary within the scope of the attached claims (pg. 19) and Sipola also discloses that the transmitted data in the header blocks can be checked and corrected by transmitting and retransmitting of the original header blocks so that data in the payload blocks can also be checked and corrected like the header blocks as desired if needed. Sipola does not disclose that each packet in the sequence including a sequence identifier. However, Lindhorst-Ko et al disclose each packet in the sequence including a sequence number identifier (paragraph (0009), (0024 and (0028)).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to include in each packet a sequence number identifier as taught by Linhhorst-Ko et al into the invention of Sipola in order to permit the receiving end to detect duplicated or out-of-order packets or lost packets.

As per claims 8, 14 and 20, these claims are also rejected under silimar rationale as set forth in claims 1 and 6-7.

As per claims 15-16, these claims are also rejected under similar rationale as set forth in claim 1.

3. Claims 2-5 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sipola (WO 0045543) in view of Lindhorst-Ko et al ((2002/0075873) as applied to claims 1 and 6-8 above, and further in view of Choi et al ("A class of adaptive hybrid ARQ schemes for wireless links" IEEE, vol. 50, No. 3, May 20010).

As per claims 2-5, the teaching of Sipola and Lindhorst-Ko et al have been discussed above. Sipola and Lindhorst-Ko et al do not disclose the steps of monitoring and identifying erroneous received data blocks during transmission and performing error correction to recover the lost data blocks and if the error correction fails performing the steps © through (e). However, Choi et al disclose a hybrid of FEC and ARQ detect and correct data blocks errors and if the errors are uncorrectable, retransmission of the packet is requested. (See pg. 778, col. 2, section A. A hybrid of FEC and ARQ to pg. 779, line 10). Therefore, it would have been obvious to a person of ordinary skill in the communications art, at the time the invention, to incorporate the hybrid of FEC and ARQ of Choi et al into the invention of Sipola and Lindhorst-Ko et al so that the lost data block can be corrected and if the errors are uncorrectable retransmission of the packet is requested.

As per claim 11, Further, Choi et al disclose a Reed-Solomon block coder (RS coder). (See pg. 777, col. 2, line 12).

As per claims 12-13, these claims are also rejected under similar rationale as set forth in claims 2-5.

4. Claims 17-19 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sipola (WO 0045543) and Lindhorst-Ko et al (2002/0075873) as applied to claims 1, 8 and 15 above. And further in view of Kwon et al (6,594,262).

As per claims 17, 19 and 9-10, the teaching of Sipola and Lindhorst-Ko et al have been discussed above, Sipola and Lindhorst-Ko et al do not disclose a demodulator

configured to receive and demodulate a modulated signal and a decoder operatively coupled to the demodulator for decoding the demodulated packets. However, Kwon et al disclose a demodulator coupled to receive and demodulate a modulated signal and a decoder operatively coupled to the demodulator for decoding and correcting burst error. Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the demodulator that configured to receive and demodulate a modulated signal and a decoder operatively coupled to the demodulator for decoding the demodulated packets as taught by Kwon et al into the invention of Sipola and Lindhorst-Ko et al so that burst error can be corrected. (See col. 1, lines 50-60).

As per claim 18, Kwon et al further disclose an error correction means for performing error correction to recover the erroneously received data blocks. (See col. 3, lines 16-23).

5. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



PHUNG M. CHUNG
PRIMARY EXAMINER